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(71) Applicant (for all designated States except US): **THE REGENTS OF THE UNIVERSITY OF CALIFORNIA** [US/US]; 1111 Franklin Street, 12th Floor, Oakland, California 94607-5200 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **NEWMAN, Jack, D.** [US/US]; 1715 Sacramento Street, Berkeley, California 94702 (US). **RENNINGER, Neil** [US/US]; 412 B. Kains Avenue, Albany, California 94706 (US). **MARTIN, Vincent J.J.** [CA/CA]; 4921 Montclair, Montreal, Quebec H4V 2K7 (CA). **KEASLING, Jay, D.** [US/US]; 1160 Sterling Avenue, Berkeley, California 94708 (US). **REILING, Keith, Kinkead** [US/US]; 3534 Rhoda Avenue, Oakland, California 94602 (US).

(74) Agent: **BORDEN, Paula, A.**; BOZICEVIC, FIELD & FRANCIS LLP, 1900 University Avenue, Suite 200, East Palo Alto, California 94303 (US).

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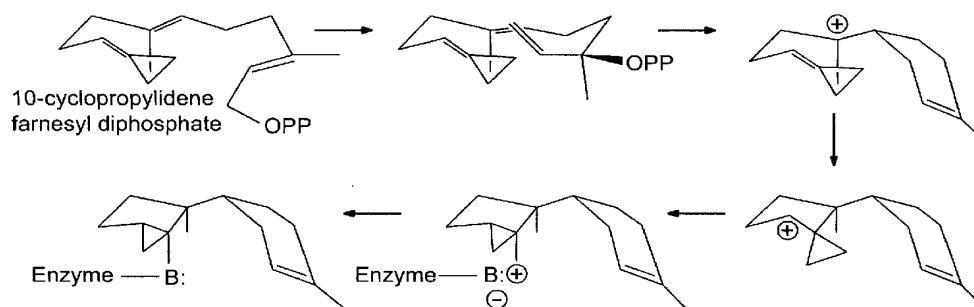
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(54) Title: METHOD FOR IDENTIFICATION OF ENZYMES



(57) Abstract: The present invention provides a method of identifying an enzyme, the method generally involving contacting a sample containing an enzyme with a selected enzyme substrate, where the contacting provides for covalent binding of the substrate to an amino acid of the enzyme to form a covalently modified enzyme; and determining the amino acid sequence of at least a portion of the covalently modified enzyme, using any available peptide sequencing technology, such as tandem mass spectrometry. The present invention further provides methods of identifying a nucleic acid encoding an enzyme, the methods generally involving identifying an enzyme; and, based on the amino acid sequence of at least a portion of the enzyme, designing nucleic acid probes or primers that hybridize to the nucleic acid encoding the enzyme.